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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/940,686	08/27/2001	Bernhard O. Palsson	UCSD1320-1	4327

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Lisa A. Haile, J.D., Ph.D.
GRAY CARY WARE & FREIDENRICH LLP
Suite 1600
4365 Executive Drive
San Diego, CA 92121-2189

EXAMINER

MORAN, MARJORIE A

ART UNIT	PAPER NUMBER
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1631

DATE MAILED: 09/30/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/940,686

Applicant(s)

PALSSON ET AL.

Examiner

Marjorie A. Moran

Art Unit

1631

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 1 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 27 August 2001.
- 2a) ☐ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-22 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☐ Claim(s) _____ is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☒ Claim(s) 1-22 are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
* See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☐ Notice of References Cited (PTO-892) 4) ☐ Interview Summary (PTO-413) Paper No(s). _____
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948) 5) ☐ Notice of Informal Patent Application (PTO-152)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____ 6) ☐ Other: _____

Election/Restrictions

Restriction to one of the following inventions is required under 35 U.S.C. 121:

- I. Claims 1-10, drawn to a method of achieving optimal function of a biochemical network, classified in class 702, subclass 19.
- II. Claim 11, drawn to an enriched cell population, classified in class 435, subclass 29.
- III. Claim 12, drawn to an enriched biomolecule, classified in class 530, subclass 350. Note that this is a putative classification as the biomolecule is not identified as any particular product.
- IV. Claim 13, drawn to a method of constructing optimal functions of a biochemical network in a cell, classified in class 435, subclass 29.
- V. Claims 14-19, drawn to a computer system comprising a database of reaction networks, classified in class 700, subclass 29.
- VI. Claim 20, drawn to a computer program product, classified in class 700, subclass 1.
- VII. Claim 21, drawn to a method of achieving a desired optimal function of a biochemical reaction network comprising method steps different from those of Group I, classified in class 702, subclass 19.

The inventions are distinct, each from the other because of the following reasons:

Invention I is apparently related to Inventions II and III as process of making and products made. The inventions are distinct if either or both of the following can be shown: (1) that the process as claimed can be used to make other and materially

different product or (2) that the product as claimed can be made by another and materially different process (MPEP § 806.05(f)). In the instant case the method claims of Group I are not actually directed to production of any product. However, as both the product of Groups II and III recite being "made" by the method of Group I, then the method of Group I apparently can be used to make two materially different products. For these reasons, Group I is separate and distinct from each of Groups II and III.

Inventions I, IV and VII are unrelated. Inventions are unrelated if it can be shown that they are not disclosed as capable of use together and they have different modes of operation, different functions, or different effects (MPEP § 806.04, MPEP § 808.01). In the instant case the different inventions recite different method steps, each requiring a separate search. Although certain steps may be shared between the Groups, the method of each Group recites a different set of steps from the method of any other Group. In addition, any of the methods of Groups I, IV or VII may be performed without knowledge of or reference to the steps of result of any other method. For these reasons, each of Groups I, IV and VII is separate and distinct.

None of Inventions I, IV or VII is related to either of Inventions V or VI. Inventions are unrelated if it can be shown that they are not disclosed as capable of use together and they have different modes of operation, different functions, or different effects (MPEP § 806.04, MPEP § 808.01). In the instant case, neither of the products of Groups V or VI is limited to be one for use in any of the methods of Groups I, IV or VII. None of the methods of Groups I, IV or VII is limited to be one performed using either the system or program product of Groups V and VI. Neither the system nor program

product appear to be specifically directed to perform any of the methods of Groups I, IV or VII. For these reasons, neither Group V or Group VI is related to any of Groups I, IV or VII.

Neither of Inventions II or III is related to any of Inventions IV-VII. The products of Groups II and III are not limited to be made by either of the methods of Groups IV or VII. Neither of Groups IV or VII is directed to be a method of producing anything. The organic products of Groups II and III are biochemically and physically different products from those of Groups VI and VI and would be expected to behave differently in methods of use. For these reasons, neither of Groups II or III is related to any of Groups IV-VII.

Groups II and III are separate and distinct. Although the Groups are related in that the products of both Groups are apparently produced by the same method, a cell is different biochemical entity than an organic molecule, nucleic acid, or peptide, and would be expected to behave differently in methods of use. As the products of Groups II and III have different properties and would be expected to behave differently, they are separate and distinct.

Groups V and VI are unrelated. Inventions are unrelated if it can be shown that they are not disclosed as capable of use together and they have different modes of operation, different functions, or different effects (MPEP § 806.04, MPEP § 808.01). In the instant case, the system of Group V is not limited to comprise the computer program product of Group VI and the program product of Group VI is not limited to be for use in the system of Group V. In addition, the program product of Group VI comprises networks encoded by multiple genomic sequences whereas the system of

Group V is silent with respect to networks comprising genomic sequences. As the system of Group V recites different limitations than the program product of Group VI, these products are clearly directed to different intended uses (functions), and are therefore not related.

Because these inventions are distinct for the reasons given above and have acquired a separate status in the art as shown by their different classification, restriction for examination purposes as indicated is proper.

Because these inventions are distinct for the reasons given above and the search required for any one Group is not required for any other Group, restriction for examination purposes as indicated is proper.

Species Election

This application contains claims directed to the following patentably distinct species of the claimed invention:

- (A) types of network which are (1) metabolic or (2) regulatory;
- (B) cell types which are (1) prokaryotic or (2) eukaryotic.

Applicant is required under 35 U.S.C. 121 to elect a single disclosed species from species (A) AND from species (B) above for prosecution on the merits to which the claims shall be restricted if no generic claim is finally held to be allowable. Currently, claims 1 and 7-10 are generic.

Applicant is advised that a reply to this requirement must include an identification of the species that is elected consonant with this requirement, and a listing of all claims

readable thereon, including any claims subsequently added. An argument that a claim is allowable or that all claims are generic is considered nonresponsive unless accompanied by an election.

Upon the allowance of a generic claim, applicant will be entitled to consideration of claims to additional species which are written in dependent form or otherwise include all the limitations of an allowed generic claim as provided by 37 CFR 1.141. If claims are added after the election, applicant must indicate which are readable upon the elected species. MPEP § 809.02(a).

Should applicant traverse on the ground that the species are not patentably distinct, applicant should submit evidence or identify such evidence now of record showing the species to be obvious variants or clearly admit on the record that this is the case. In either instance, if the examiner finds one of the inventions unpatentable over the prior art, the evidence or admission may be used in a rejection under 35 U.S.C. 103(a) of the other invention.

Applicant is advised that the reply to this requirement to be complete must include an election of the invention to be examined even though the requirement be traversed (37 CFR 1.143).

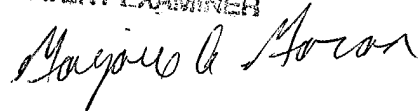
Applicant is reminded that upon the cancellation of claims to a non-elected invention, the inventorship must be amended in compliance with 37 CFR 1.48(b) if one or more of the currently named inventors is no longer an inventor of at least one claim remaining in the application. Any amendment of inventorship must be accompanied by a request under 37 CFR 1.48(b) and by the fee required under 37 CFR 1.17(i).

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Marjorie A. Moran whose telephone number is (703) 305-2363. The examiner can normally be reached on Monday to Friday, 7:30 am to 4 pm EST.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Michael Woodward can be reached on (703) 308-4028. The fax phone number for the organization where this application or proceeding is assigned is (703) 872-9306.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 305-3524.

MARJORIE MORAN
PATENT EXAMINER



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